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MEDICUS

Buckmaster (A.H.)

A REVIEW OF TWENTY-TWO COTTAGE CASES
OCCURRING IN THE
WOMEN'S HOSPITAL,
IN THE
SERVICE OF DR. T. GAILLARD THOMAS.

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BY A. H. BUCKMASTER, M. D.,

*Gynecologist to the Hospital for Mental and Nervous Diseases,
Secretary of the Brooklyn Pathological Society.*

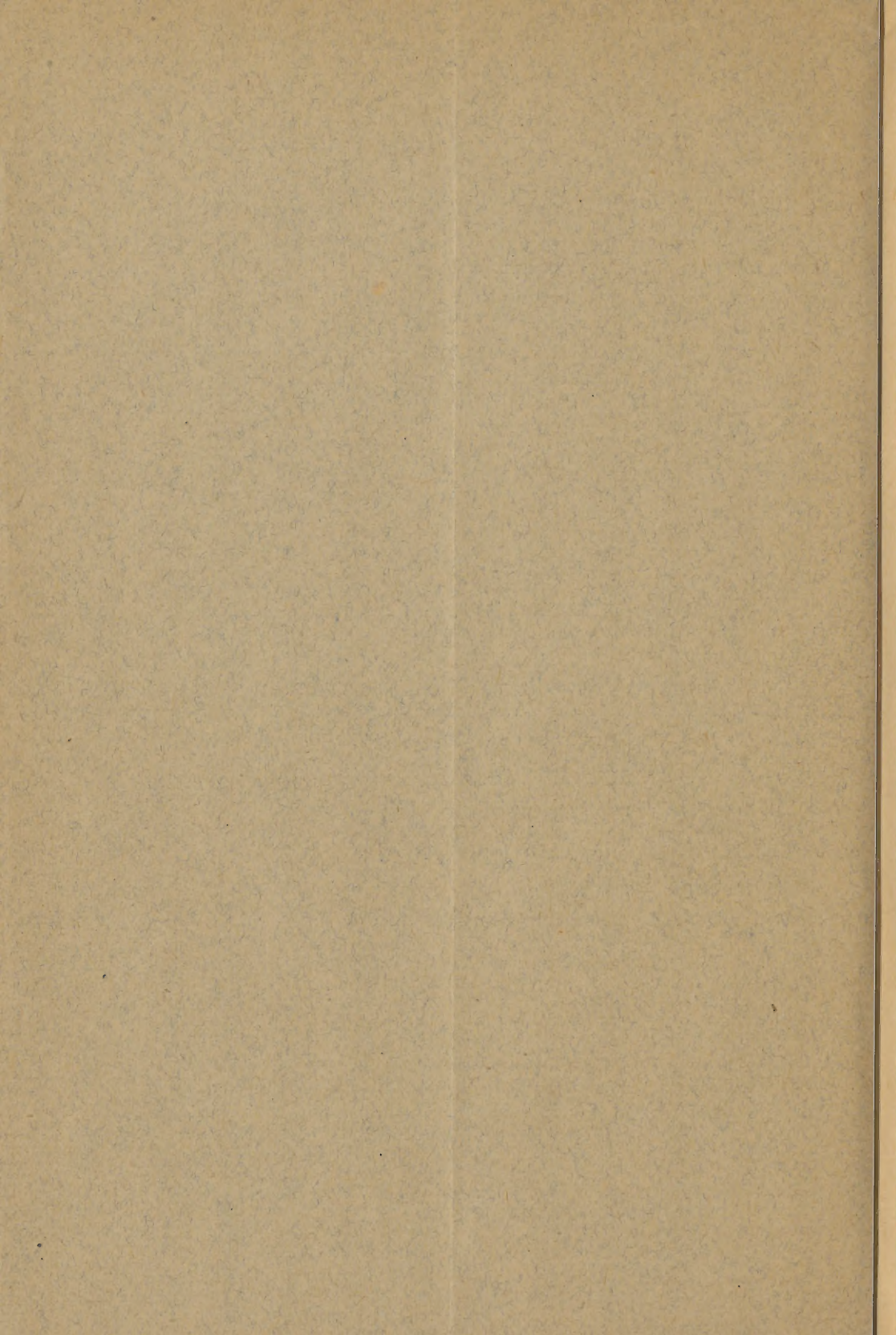
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A REVIEW OF TWENTY-TWO COTTAGE CASES
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It has been the custom at the Woman's Hospital for several years to perform operations in which the peritoneum is exposed, or in which aseptic surroundings are imperative, in a small detached building devoted exclusively to this purpose; and the term "cottage-patient" has become distinctive as regards a class of cases including laparotomies, removal of submucous fibroids filling the vagina, laparo-elytrotomy, etc.

The following cases are all the cottage operations that took place in Dr. Thomas's service while I was senior house-surgeon at that institution. They are of special interest to some of those who watched them, as no pains were spared to carry out antiseptic methods; nothing was taken for granted, and the smallest details were subjected to the personal supervision of the writer. No one who has not toiled with this subject, can appreciate the untiring vigilance that is necessary to secure the observance of antiseptic precautions. For the sake of dealing with the subject systematically and making clear the precautions exercised, four sources may be considered from which septic material can gain access to the wound.

- 1st. From persons concerned in the operation.
- 2d. From instruments, sponges, ligatures, and sutures.
- 3d. From spectators and the operating-room.
- 4th. From the patient's person.

Under the first head come the surgeon's assistants and nurses, the hands and forearms of the operator, and his perspiration.

THE TOILET OF THE OPERATING STAFF.—All taking part in the operation wash their arms and forearms carefully with soap and

water, pairing the nails and using a nail-brush. The hands are dipped into a solution of bichloride of mercury (1:2000) and a basin containing a solution of the same strength is within easy reach, so that the operator may cleanse his hands from time to time, particularly before introduction into the peritoneal cavity. When time permitted, it was the custom of the writer to take a bath shortly before the operation, and the hair of the head and face should be thoroughly cleansed.

The nurse must comply with the above mentioned antiseptic precautions.

INSTRUMENTS.—All instruments are placed, for an hour before the operation, into 1:20 carbolic acid solution, to which an equal quantity of sterilized hot water is added when the instruments are in use. The water is taken from the tank of a high-pressure boiler, and carried to the operating-room in corked demijohns.

SPONGES.—The same sponges are used continuously, and to each is sewed a piece of tape, so that it is almost impossible to overlook them when closing the abdominal cavity. After an operation the sponges are carefully washed with soap and water, and then boiled for several hours. They are preserved in a glass jar with an air-tight cover, and rest upon a false bottom composed of galvanized rubber which is perforated, and stands in a solution of carbolic acid, 1:20. Before use they are soaked for two hours in bichloride of mercury, 1:1000.

If a sponge becomes friable, or is difficult to clean, it is replaced, and a new one is prepared by soaking it in a very weak solution of hydrochloric acid for several weeks.

LIGATURES AND SUTURES.—Silver wire is rendered aseptic by immersion, with the instruments, in the solution of carbolic acid before an operation.

Of catgut, that prepared by Am. Emde was used. It is preserved in oil of juniper. No. 3 is the size most used, and Nos. 4 and 5 are at hand.

The silk for the pedicle and ligatures is prepared in the following manner: A piece of solid glass rod is bent in the form of a square, and on this the ligature is rolled, so that all parts are evenly exposed to the boiling solution of 1:2000 bichloride of mercury, in which it is suspended for an hour. It is removed from

this solution under the spray (the utmost cleanliness as to the hands being observed) and dropped into a solution of carbolic acid 1:40. Under the solution it is reeled on a glass spool, and finally placed in a bottle containing 3 per cent. of carbolic acid in alcohol. The bottle, cork, and glass spool are boiled with the ligature. The end of the ligature is carried through the cork by means of a carrying thread attached to a round-pointed needle; all of these articles having been rendered aseptic.

When the ligatures are to be used, they are passed to the first assistant, who pulls a portion out of the bottle, cuts it off, throws it away, and then draws out the part intended to be used. By this method no one touches the ligature except the one applying it. When silk is used for sewing the abdominal wall, as many needles as there are stitches likely to be required should be threaded on the silk. By catching the last needle threaded, holding that fast to the end of the silk, and holding the remaining needles near the cork with the other hand, the annoyance of stopping to thread the needle is avoided. They are retained under an antiseptic solution.

Three varieties of silk are used. That for the pedicle is especially made for this purpose of loosely twisted strands, and is so strong that it cannot be broken with steady traction when used with a surgeon's knot about the pedicle. The smaller sizes are found useful to ligate vessels, and as sutures.

SPECTATORS AND THE ROOM.—The walls, flooring, and everything in the operating-room should be rubbed with a cloth wet with the chloride of lime, 1:10, and the doors and windows thrown open for twenty-four hours, so that there may be the freest circulation of fresh air.¹ For an hour and a half two spray apparatuses saturate the air with a solution of carbolic acid 1:40. The solution used is about 1:20, but it loses about one-half of its strength by dilution with the steam. The spray is discontinued when the operation commences.

To guard against contamination from spectators, a rope is interposed, at least three feet from the wound.

AUTO-INFECTION.—The abdominal wall is shaved low enough to prevent the pubic hair from reaching the wound, and the abdomen washed with soap and water and covered with a towel wet

¹ The cleansing of the room was not always done as it should have been, owing to the exigencies of the hospital management.

with a solution of bichloride of mercury, 1:1000. This is removed just before the operator makes his first incision.

To prevent auto-infection from cysts containing septic material, the patient is turned on the side when they are evacuated. This procedure, which, I believe, originated at the Woman's Hospital, marks an important advance in the *technique* of operations for the removal of fluid tumors. If done properly, no undesirable fluid can escape into the abdominal cavity, and it is most expeditious. There is no trocar to get out of order and to be found unsuitable for the particular case.

The cottages where these operations are done have been built for a number of years, and while they were an advance at the time of construction they are not in conformity with modern surgical architecture. They are small frame buildings, about 12x26, divided into two equal rooms by a square hallway and closet, between which is a passage connecting the two rooms. The hallway opens at the left side into the nurse's room, in which is a large stove by which the building is heated. There are no sewer connections with these buildings. The water is carried to them in pails, and the slops removed by a similar method.

Before speaking of individual cases it would, perhaps, be better, in order to avoid repetition, to mention the routine methods—preparatory, operative, and after-treatment.

The patient's general condition is improved as much as possible, iron and a bitter tonic, and as much sunlight and fresh air as can be taken without causing fatigue. A vaseline bath is given every third night, and the bowels thoroughly evacuated, commencing the catharsis at least one week before the operation. The habits of the patient are taken into account as to the cathartic selected, but care is taken to avoid active catharsis two days prior to the operation, so that the patient may not be prostrated. The urine is always examined when the patient enters the hospital, and, if loaded with urates, an alkali largely diluted is used. Lithia water, or acetate of potassium ($\frac{2}{3}$ ss—Oj), to which is added iron if it be required, is found of service.

The patient is dressed with thick flannel drawers, stockings, and undershirt, and a blanket is pinned about the lower extremities. These are made to hang over the foot of the table by flexing the legs, and the feet are placed on a rest provided for

that purpose. A towel wet with 1:20 carbolic acid rests on the blanket.

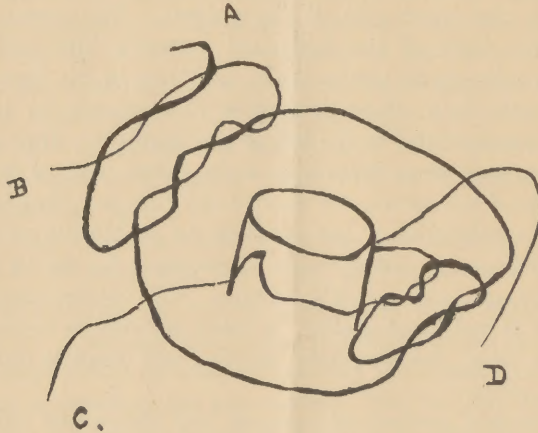
The operator stands to the right of the table facing his first assistant, on the other side of the patient. The second assistant stands a little back of the first, and between him and a table holding the submerged instruments, and has in his hands a tray with antiseptic fluid containing those instruments for immediate use. Two nurses stand to the left of the operator. One takes the dirty sponges and drops them into a six-gallon pail of hot water. After the blood and serum are washed out they are dropped into a similar pail containing a hot solution of bichloride of mercury, 1:4000. The second nurse holds them ready for use in a basin so that the operator can quickly change. If a sponge should fall to the floor it is not used again. A third assistant is responsible for the cautery iron, the Paquelin cautery, and electric light for the abdominal cavity.

Dr. Thomas's method of opening the abdominal cavity is as follows: An incision, three and a half or four inches (the tissues will contract so as to make the length about two inches), is quickly made to the *linea alba* or transversalis fascia. While the *linea alba* is the objective point, a slight variation to one side or the other is disregarded, and the cut continued directly through the muscle. The peritoneum is raised with a fine tenaculum, and snipped with scissors. A director is then introduced and the opening enlarged as desired. Hemorrhage has been checked by Péan's or Well's forceps before the peritoneum is incised. A digital or manual examination of the cavity can now be made. If a cyst is to be evacuated, the patient is turned on the right side, and after securing the sac with Nélaton's cyst forceps, an opening is made by the knife or scissors—a trocar may first be used. If there are endogenous cysts, these are broken up by the hand introduced into the opened cyst cavity. The abdominal cavity has been closed from the external air by sponges about the pedicle in the meantime, and the patient is again turned on her back.

In removal of the uterine appendages the patient is not turned on her side, unless gravity is desired to enable a pus-filled tube (or something of this nature), if accidentally broken, to drain itself on a sponge.

This diagram shows the method of securing the pedicle. After

a double ligature has been passed, the strands *A* and *B* are adjusted and need only be tightened to be secure. *C* and *D* are merely



passed through the stump. They are tied in the same manner as *A* and *B*, with the exception that they pass about the upper half of the stump first. By this method each ligature passes once half and once wholly about the stump, so that it is completely encircled thrice.

In closing the abdomen, three or four silver sutures pass completely through the abdominal wall, including peritoneum. The edges of the peritoneum are united by a continuous catgut suture, the muscles and fascia by the same thread, and finally, the skin is approximated more exactly by catgut than has been done by the silver sutures.

After sewing the abdominal wall together, the wound is covered with collodion, and before this dries well dusted over with iodoform; over this is placed a piece of iodoformized gauze, and then a number of narrow strips of adhesive plaster to give additional support in case the patient vomits, coughs, etc. This is covered by a roll of cotton batting, and the body encircled by a binder.

THE AFTER-TREATMENT.—After the operation has been completed, the patient is placed in bed, where there are several water cans covered with flannel by the sides and at the feet. The room is darkened, and no one permitted near but the nurse, who is

directed not to talk to the patient. If there is much pain it is controlled by compound solution of Magendie hypodermatically administered. A few small pieces of cracked ice may be held in the mouth, or two or three drops of lemon-juice to overcome nausea. I think that washing out of the stomach, immediately after the operation, in all these cases would prove most useful.

If the patient is in fair condition, no attempt to administer nourishment is made for twenty-four hours, and if quite strong, nothing is given for thirty-six hours. If by this time the gas has been passed freely, and there is no pain, a tablespoonful of milk or chicken-broth and lime-water is allowed every four hours, and an enema of beef peptonoid, half a drachm added to milk with a little liquor opii is given every four hours, alternating with the milk. Stimulants are used by the rectum, if indicated. No solid food is allowed until the sixth day. The pulse, temperature and respiration, are taken every four hours, and if the nurse is skilful this can be accomplished without disturbing the patient. The temperature is taken in the vagina.

I wish to make my acknowledgment to Dr. Thomas Keith, of Edinburgh, for his kindness in communicating to me his practice in this important stage of these cases.

CASE I. *Commencing malignant disease of the uterus; removal of diseased tissue; recovery.*—Mrs. K., æt. forty-four; no children; last miscarriage twenty-seven years ago. Principal symptom has been a bloody discharge for six months, which has of late been very offensive. Dr. Thomas sent her to the hospital with the diagnosis of commencing malignant disease. Her general condition is excellent.

Sept. 26. Dr. Thomas drew down the cervix with a stout tenaculum, and removed a cone-shaped mass, including the diseased tissue, with a pair of sharp-pointed scissors slightly curved on the flat. The uterus was thus shelled out. On account of the hemorrhage it was necessary to apply two heavy silk ligatures at right angles, running up in the axis of the uterus, to draw together the bleeding surfaces. A number of smaller ligatures were used. Ligatures left hanging into vagina, and a tampon soaked with bichloride solution, 1:2000, used. This was removed on the third day, when there was a slight odor.

Oct. 14. All ligatures have come away. The discharge, which has been quite offensive, and required frequent douchings, has now markedly diminished. Patient sitting up.

25th. Patient left hospital.

Jan., 1886. Dr. Thomas heard from patient, who is feeling very well; no return of discharge.

CASE II. *Ovariectomy; recovery*.—Mrs. K., æt. twenty-three; no children; no miscarriages. About six months ago noticed general enlargement of abdomen. She has had no pain, but felt a dragging sensation in loins on assuming the erect posture. No other symptoms except vesical irritability and slight increase in monthly flow. Examination revealed a thin-walled cyst; fluctuation readily obtained, and equal in all directions. Uterus retroflexed and carried to the right.

Oct. 3. Dr. Thomas removed an ovarian tumor weighing $14\frac{1}{2}$ pounds, in a little less than ten minutes. The left ovary presented several small cysts, which were punctured; also a small pedunculated fibroid, which was removed after its pedicle had been ligated. The ovary was then returned.

When the patient entered the hospital, at the right apex was heard high pitched and prolonged expiration, and the patient gave a history of cough for several months. In the second week after the operation, there were abundant rales at the right apex and free expectoration. The evening temperature would run as high as 103° , and the patient complained of severe sweats in the afternoon. Treatment: Fresh air, as much food as could be digested, stimulants, etc. The active process stopped finally, and March 1, 1886, she wrote that she was doing nicely.

CASE III. *Ovariectomy; death*.—Miss H., æt. fifty-one. Noticed general abdominal enlargement for one year—distinctive tumor appreciated two months ago. Principal symptom is pain on left side and inconvenience of tumor mass. General condition poor.

Oct. 17. Dr. Thomas removed an ovarian tumor from the right side. There were a few strong adhesions but no other complications.

21st. The patient died; the cause of death is unknown. The pulse had been very weak but not particularly rapid until the afternoon of this day, when the temperature ran up to 106° F., and the pulse to 130. She was comatose for a couple of hours before death. The autopsy showed much fat about the heart, but the fibrillæ were not affected. The patient had passed a fair amount of urine and it contained no albumen. There had been some oozing from the stump, not more than an ounce of odorless, fluid blood was found.

CASE IV. *Hegar's operation; recovery*.—Miss S., æt. thirty-two. Menstruation has been quite profuse, and the patient suffers greatly from abdominal pain. The symptoms arise from the weight caused by large mural fibroid. She is a factory girl, dependent on her exertions for a living.

Oct. 10. Dr. Thomas performed Hegar's operation, removing the ovaries without the tubes. The peritoneum was closed by continuous catgut suture; the pulse and temperature rose gradually after the operation, and emesis was continuous. On the second day after the operation

the pulse was 138, temp. 102.5° F., resp. 14, and the patient was vomiting incessantly. On the fourth day the temp. was 105° F., and pulse 152. On the morning of the fifth day the abdomen was reopened, but nothing found. From this time the patient made a good recovery. A mural abscess developed a few days after the abdominal cavity had been reopened, but no local tenderness at that time existed, although it was carefully sought for.

August, 1886. Examination by the writer showed that the mass was smaller, but nodules could now be detected that were not before apparent. Patient says she has very much less disturbance, and is sure the mass is much smaller. The nodules that are now apparent were probably present before the operation, but atrophy in some portions of the tumor has changed its position.

CASE V. *Removal of the ovaries and tubes; recovery.*—Miss H., æt. twenty-four. Has suffered intensely at her menstrual periods for years. She was under treatment for a long time at her home in the West, and as a last resort was sent to New York City. The ovaries were enlarged, tender, and prolapsed.

Oct. 10. Dr. Thomas removed the ovaries and tubes. The patient made a good recovery; there was no complication. June 2, 1886, she writes: "I can endure a great deal of exercise with very little fatigue, and feel better than ever before in my life."

CASE VI. *Ovariectomy; recovery.*—Mrs. D., æt. thirty-four; seven children. One miscarriage three years ago. Two years ago her abdomen commenced to enlarge, and she has lost a great deal of flesh in the past seven months. Suffers from pain in the side for the past six weeks. Examination made evident the signs of a simple cyst.

Nov. 21. Dr. Thomas removed a large ovarian tumor from the left side. There was a varicose condition of the veins of the broad ligament, some being as large as one's thumb. The right ovary was normal. Time of operation twelve minutes. There were no after-complications. I heard from the patient several months after the operation and she was doing bravely.

CASE VII. *Removal of fibroid; recovery.*—Mrs. W., æt. forty-three; no children; no miscarriages. Has flowed excessively for a year. Was in the hospital five months previously, and Dr. Thomas diagnosed a large fibro-myoma of the uterus of the submucous variety. He thought it was best to wait at that time, and in the meanwhile to have the patient carefully watched. He thought that by delaying, the pedunculation would be more fully accomplished. When she presented herself at the hospital the second time, she was so weak and anæmic that a fainting fit would follow an attempt to assume an upright posture. The fibroid filled the vagina, and from pressure, and poor nutrition, it had commenced to slough on its external surface. Her principal symptoms at this time were

vesical irritability and dragging pains. She had had morphine for the several weeks.

Oct. 28. Dr. Thomas removed the mass by the vagina piecemeal, with a very powerful pair of scissors; at times cutting with the greatest care, and at others removing bodily pieces as large as half a kidney. The mass altogether weighed a little less than three pounds, when the blood had drained away. The patient was very weak, and the hemorrhage was controlled by steady traction on the uterus with a stout tenaculum, held by the writer.

February 25, 1886, this patient writes: "I am gaining strength and flesh very rapidly."

CASE VIII. *Removal of fibroid; recovery.*—Mrs. K.; laparotomy and removal of a fibroid tumor and drawing up the vaginal wall to cure a vaginal hernia. This case is reported in full by Dr. Thomas in a paper read before the Academy of Medicine, December, 1885, and published in the *New York Medical Journal*, December 26th of the same year.

CASE IX. *Removal of dermoid cyst of ovary; recovery.*—Miss McC., æt. twenty-six; has suffered more or less pain for months. Has had slight vesical irritability for years. Examination shows a large mass wedged in the pelvis. The uterus is thrown forward and crowded up against the symphysis pubes, and measures four and a half inches in depth. The mass felt so hard, that the writer thought it was a fibroid of the posterior wall of the uterus.

Nov 9. Dr. Thomas removed a dermoid cyst of the left ovary. The contents consisted of a reddish hair, several imperfect teeth, and a large mass of fatty fluid. The right ovary and tube removed on account of cystic degeneration in the ovary.

Complications: A large mural abscess; otherwise made a good recovery. Have heard of the patient through others within the past five months, and she is doing well.

CASE X. *Ovariectomy; recovery.*—Mrs. F., æt. thirty-four. Two children, youngest twelve years of age. She has suffered from digestive derangements and bearing-down pains for about a year, and for the same time has noticed two lumps in the abdomen side by side. Examination revealed two dense cysts connected to the uterus and each other.

Nov. 9. Dr. Thomas made the usual incision. There were dense adhesions in all directions, and after working to the side, a slate-colored cyst wall presented. The cyst was evacuated in the usual manner. The adhesions to the small intestine were very numerous. These were broken up as gently as possible by the sponge and the fingers, and the cyst removed. Below the position of the cyst, and to the right, was discovered a smaller papillomatous mass about the size of an orange. After much difficulty, on account of hemorrhage, this was removed. It proved to be

the right ovary. A large number of silk ligatures were left in the abdominal cavity, and a long glass drainage tube was used.

On the seventh night the track of the drainage tube was washed out carefully, and, afterward, twice daily, as the discharge was quite large in amount, and rapidly became offensive when not thoroughly cleaned. The temperature could be maintained nearly normal by this means.

This patient has been under my care since the operation, on account of a fistulous tract that has not yet entirely closed. This is probably due to a ligature, and as it gives her very little inconvenience, I have advised her to wait patiently until it comes away. I am the more inclined to give this advice, as I have known of a somewhat similar case where death followed operative interference.

CASE XI. *Ovariectomy; recovery.*—Mrs. B., æt. fifty-one, no children, five miscarriages; the last five years ago. Menstrual flux normal. She was tapped five months ago for dropsy, but the relief was of short duration. First noticed increase in size one year ago. The principal symptoms are great emaciation, and discomfort from the presence of a large cyst.

Nov. 4. Dr. Thomas removed a large ovarian cyst; there were no adhesions, and the patient made a good recovery. The temperature was never above 100° F. I heard from the patient nine months after the operation, and she felt very well.

CASE XII. *Abdominal abscess; laparotomy; recovery.*—Mrs. K., æt. twenty-three; no children; suffering from hectic for past six months. Abdominal cyst discovered. It was thought to be an abscess.

Nov. 21. Dr. Thomas made the usual incision. When the peritoneum was reached everything was found matted together. On opening the abdominal cavity, a slight tear made an opening, through which welled up stinking pus. Dr. Thomas seized the sac with a tenaculum, and held it so that not a drop escaped into the abdominal cavity. There was over a quart of this offensive purulent fluid. The wound was washed out with a solution of mercuric chloride, 1 : 4000, and the wound closed after the sac was securely fastened to the abdominal wall. A long glass drainage tube was left projecting from the sac. The cavity had been closing up so nicely from the bottom, that when she left the hospital a two and a half inch tube was substituted for the original one of six inches.

The sac was kept clean by repeated antiseptic douches. The temperature was taken every four hours, and if above 100° F. the interval between the washings was diminished. It was done on some days every second hour. The discharge continued sweet after the first few washings. The patient had been much run down before the operation, but improved so much afterward that she became impatient because of the restraints of the hospital, and took "French leave."

CASE XIII. *Removal of uterine appendage; recovery.*—Miss M., æt.

thirty-three. She has suffered from pain in her left side, particularly at the menstrual periods, until life has become a burden. She is a school-teacher, dependent on a salary for her maintenance, but is unable to do any work at the time of her periods. She has undergone varied treatment from many physicians, but with no benefit. The uterus, which is retroflexed, was at one time replaced forcibly, while the patient was etherized, but, as might have been expected, she was not relieved.

Nov. 25. Dr. F. P. Chambers removed both ovaries and tubes. No complications except that a small cyst ruptured in removing the right ovary, but the fluid was clear.

In this case the ovaries and tubes were as healthy as many women have who probably never have a symptom of pelvic trouble. I have removed much worse specimens after death, where there was no history of any symptoms referable to this pathological condition, yet no one who was well acquainted with the facts in this case, could have doubted the indications for this operation, judging entirely from the results.

I quote from a note received from this patient, December 4, 1886: "I received your note this week, and am very happy to say I feel perfectly well. My head troubled me at first very much, but it is constantly improving, and does not trouble me more than once a day (month?). I was unwell but twice, that being the two successive months after the operation. It took a long time to regain my strength, but I can say now that I never felt stronger or better. I have gained about twenty pounds."

CASE XIV. *Ovariectomy; recovery*.—Miss S., æt. twenty-six, for four months has noticed her abdomen increasing in size. The principal symptoms are due to inconvenience caused by the size of the mass.

Nov. 28. Dr. Thomas removed a twenty-two pound tumor of the right ovary. There had been suppuration in the cyst. The left ovary, which was enlarged and cystic, was removed with the tube. No complications. The patient made a good recovery.

CASE XV. *Removal of parovarian cyst; recovery*.—Miss R., æt. twenty-two. For four years her abdomen has steadily increased in size, most noticeably on the right side. The increase has been much more rapid for the past few months. Principal symptoms: nausea and shortness of breath. This patient came alone from Cuba. She was unable to speak a word of English, and I cannot refrain from a passing tribute to the courage that enabled her to come among strangers and undergo so serious an operation.

The patient had a severe chill after the operation, and her temperature ran up to 103° F. This readily responded to quinine; otherwise the case was uneventful.

CASE XVI. *Removal of ovarian cyst from right side, and of uterine appendages from the left; recovery*.—Mrs. H., æt. twenty-nine; no children, and no miscarriages. Well, until one year ago, when her abdomen began

to increase in size. The growth has been more rapid lately. It has seemed stationary for the past two months. Principal symptoms: inconvenience of locomotion and dyspnoea.

Dec. 5. Dr. Thomas removed an ovarian cyst from the right side. The pedicle was about eight inches in length and very thin. The left tube was enlarged and, with the ovary, bound down. From it stood out a gelatinous mass about as large as a thimble; this was broken in removing it. The ovary and the tube both removed. The temperature went up the first few days to 102.3° F., otherwise there was no complication. The patient was heard from nine months after the operation and was doing well.

CASE XVII. Removal of uterine appendages; recovery.—Mrs. B., æt. twenty-eight. Since the birth of her last child two years ago, she has suffered very much at her periods and at other times. She has a marked antelexion, but the uterus easily admits a large sized probe. She has been under treatment for two months in the hospital and for a long time outside of this institution.

Nov. 23. Dr. Thomas removed both ovaries and tubes. The tubes and ovaries on both sides were bound down by strong adhesions. The usual three layers of sutures used, but they were all of catgut. They were no complications. I heard from this patient a few months after the operation, but she felt no better, and thought she was somewhat worse.

CASE XVIII. Removal of uterine appendages; recovery.—Mrs. G., æt. twenty-two; no children; no miscarriages. This patient suffered for eleven years from dysmenorrhœa. She has been under treatment for more than two years. An ovary found prolapsed, and much inflammatory action about it. She has been in the hospital, and under observation for four months.

Jan. 2. Dr. Thomas made the usual incision, and found the tubes largely dilated and full of blood; these, with the ovaries, removed; she made a good recovery; no complications. I heard from her seven months after the operation; feeling very well, except for vesical irritability, which troubled her previous to the operation.

CASE XIX. Removal of uterine appendages; recovery.—Miss L., æt. twenty-three; has never menstruated; at periods of about twenty-eight days she has suffered from bearing-down pains. She was sent to the hospital for operation with the diagnosis of hæmatometra. It was ascertained that this diagnosis was incorrect, and it proved to be a case of undersized uterus and enlarged ovaries and tubes. She was sent away from the hospital, the dangers of the operation being strongly presented to her mind. In a few months she returned, saying she did not care to live and suffer as she was doing. She was a school-teacher.

Dec. 23. Dr. Thomas removed the tubes, which were dilated as large as small lemons, and full of clotted blood. The ovaries were the size of horse-chestnut burrs, and also filled with coagulated blood; they were also

removed. There were no complications, and the patient made a good recovery. I heard from her some time since the operation, and she is doing well.

CASE XX. *Removal of ovarian cyst from left side, and of appendages from the right; recovery.*—Mrs. G., æt. twenty-eight; never pregnant. Her principal symptoms are increase in size of the abdomen, which she has noticed for the past four months. She has also suffered from abdominal pain.

Jan. 16. Dr. Thomas removed an ovarian cyst of the left side. The right ovary was found cystic, and was also removed, with its tube. The operation was complicated by a band of tissue between the abdomen and the cyst. This was tied with silk, and divided. The highest temperature was 100.4° F. The patient left the hospital well. She has not been heard from since.

CASE XXI. *Removal of uterine appendages; recovery.*—Mrs. S., æt. twenty-seven; never pregnant; suffers from pain in her abdomen. Has had pelvic peritonitis several times.

Jan. 16. Dr. Thomas removed both ovaries and tubes. The left tube was much enlarged and filled with pus; both tube and ovary bound down by very strong adhesions. The tube was ruptured in removing it, and part of its contents escaped into the abdominal cavity. Right ovary and tube firmly bound down. The tube was enlarged. The patient made a fair recovery from the operation.

Jan. 16, 1887. Mrs. S. writes: "I have felt very well, and have not needed any medical treatment."

CASE XXII. *Removal of uterine appendages; recovery.*—Mrs. M., æt. thirty-five; three children; the last child was still-born, three years ago; has had *grand mal* for three years. The periods between these attacks have grown less, and now appears every two weeks. Examination shows an enlarged and very tender ovary on the right side.

Jan. 26. Dr. Thomas removed ovaries and tubes. There were no complications, and the patient made a good recovery. She left the hospital in the middle of February. I have in vain written to her and her family for information as to her condition.

